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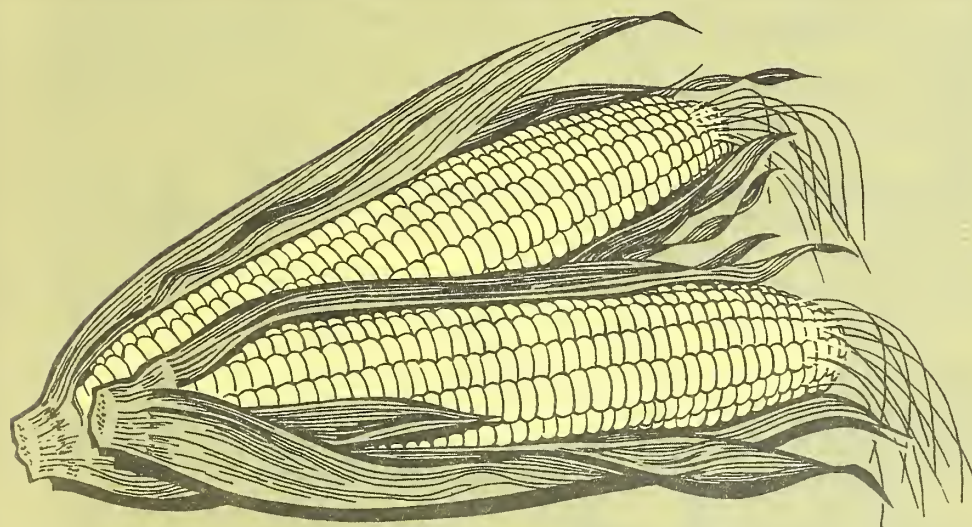
U. S. DEPARTMENT OF AGRICULTURE • ECONOMIC RESEARCH SERVICE • SEPTEMBER 1967 • FCR - 52

COSTS and RETURNS

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**Commercial
Corn Belt
Farms**

1966

FARM COSTS STUDIES

This report is part of a continuing nationwide study of costs and returns on commercial farms and ranches by type and size in some of the important farming regions of the United States. The study is conducted under the general supervision of Wylie D. Goodsell, Farm Production Economics Division, Economic Research Service. Objectives, methodology, procedure, and terms are uniform for all areas covered in the study.

The 1966 costs and returns studies have been conducted on the following:

- Dairy Farms, Northeast and Midwest
- Corn Belt Farms
- Egg-Producing Farms, New Jersey
- Broiler Farms, Maine, Delmarva, and Georgia
- Cotton Farms
- Tobacco Farms, Coastal Plain, North Carolina
- Tobacco-Livestock Farms, Bluegrass Area, Kentucky and Pennyroyal Area, Kentucky-Tennessee
- Wheat Farms, Plains and Pacific Northwest
- Western Livestock Ranches

Summary statistics for all types of farms in the study are presented in a report, revised annually. The latest such report was published in 1966 and is titled: "Farm Costs and Returns, Commercial Farms, by Type, Size, and Location," Agriculture Information Bulletin No. 230, Revised 1966.

Information on the studies can be obtained from Farm Production Economics Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

COSTS AND RETURNS

COMMERCIAL CORN BELT FARMS, 1966

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Net farm incomes were relatively high in 1966 on the four important types of Corn Belt farms analyzed in this study. On each type of farm the level of income was more than 50 percent above the average for the preceding 10 years, 1956-65. On three of the four farm types, the average net farm incomes were record high and ranged from 8 percent to 33 percent above the 1965 figures, as shown below. On the hog-beef fattening farms, average net farm incomes were a little lower than in 1965 but exceed those of any other year. The specific areas where these types of farms are mainly located are shown in figure 1.

Farm Type				Percentage
	1956-65	1965	1966	change, 1965 to 1966
Hog-dairy	\$ 7,189	\$10,216	\$13,589	33
Hog fattening--beef raising	4,176	7,853	8,631	10
Hog-beef fattening	9,574	15,708	14,522	-8
Cash grain	10,398	14,964	16,110	8

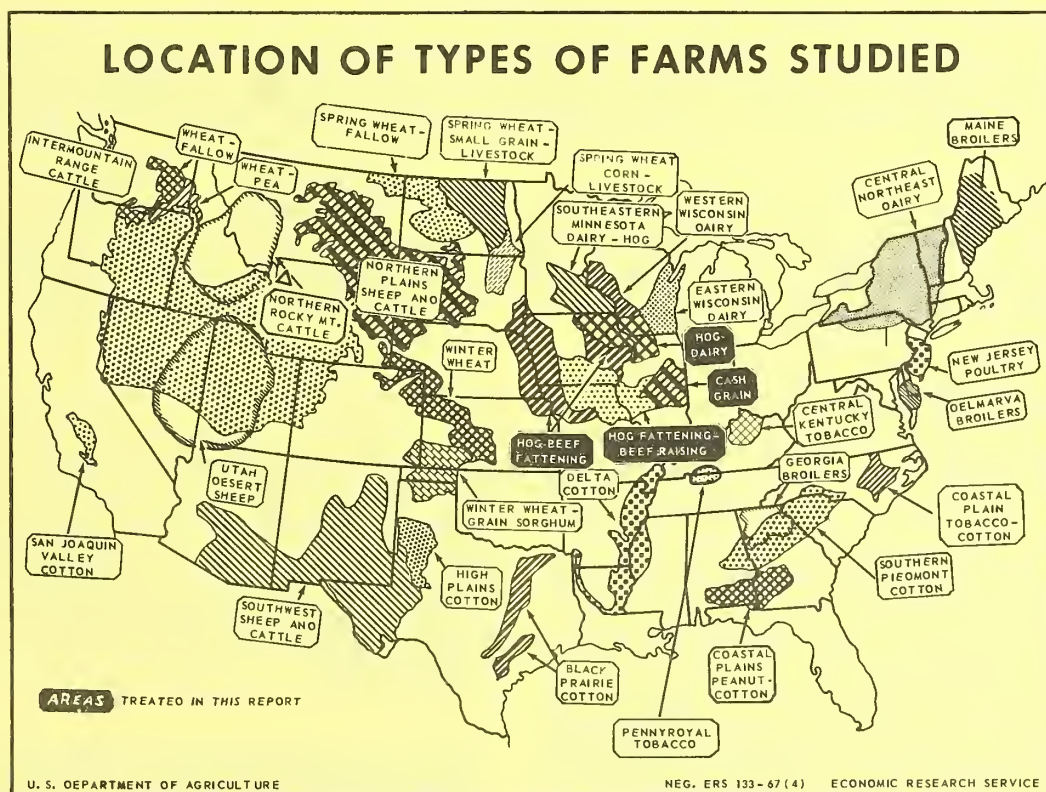


Figure 1

Total cash receipts and gross farm income in 1966 were greater than in 1965 on all four types of farms. A principal factor in the larger cash receipts was the higher level of prices received for products sold. Prices received in 1966 were higher for corn, soybeans, wheat, milk, hogs, and cattle, except on hog-beef fattening farms where a large proportion of the cattle sales were in November and December at somewhat lower prices. The index of prices received for all farm products sold ranged from 1 percent higher than in 1965 on hog-beef fattening farms to 15 percent higher than in 1965 on cash grain farms.

Greater production of corn resulting from larger acreages and higher yields contributed to increased cash receipts on hog-dairy and hog-beef fattening farms. Marketings of cattle and hogs were larger than in 1965 on the livestock farms. Milk production on hog-dairy farms was about 5 percent larger than in 1965.

Total value of farm capital per farm, computed at prevailing prices on inventory dates, increased during the year on all of these types of farms. Contributing to the larger total value were increased investment in tractors, trucks, machinery and livestock, higher prices per acre of land, and some increase in acreage per farm. The increase in land values per acre averaged from 10 to 14 percent. Average values per acre in 1966 were \$260 on hog fattening--beef raising farms, \$320 on hog-dairy farms, \$360 on hog-beef fattening farms, and \$600 on cash grain farms.

Total farm expense per farm was larger in 1966 than in 1965 by 7 to 11 percent on these four types of farms. The increase in total expenses resulted from larger quantities and higher prices for items used in production. The index of prices paid for all production inputs ranged from 103 percent of 1965 on cash grain farms to 110 percent on hog-beef fattening farms.

The ratio of prices received to prices paid was more favorable in 1966 than in 1965 except on hog-beef fattening farms. An unfavorable ratio on hog-beef fattening farms resulted from the relatively higher prices paid for feeder cattle and the relatively lower prices received for fat cattle.

Hog-Dairy Farms

Net incomes in 1966 on hog-dairy farms in the Corn Belt were record high, averaging about \$13,590 per farm. This was 33 percent greater than in 1965 (fig. 2 and table 1). Cash receipts were up 22 percent while cash expenses were up 10 percent.

The increase in total cash receipts in 1966 was the result of larger returns from sales of milk, hogs, cattle, corn, and soybeans. Acreages of corn and soybeans were

larger and yields of corn were higher than in 1965. Soybean yields were slightly lower. The index of average yields of all crops was up nearly 10 percent. Production of pork was larger than in 1965, but the lowest since 1960. The number of milk cows was slightly increased and milk production per cow was a little more than in 1965.

Prices received per unit for all crops, livestock, and livestock products sold were higher in 1966 than

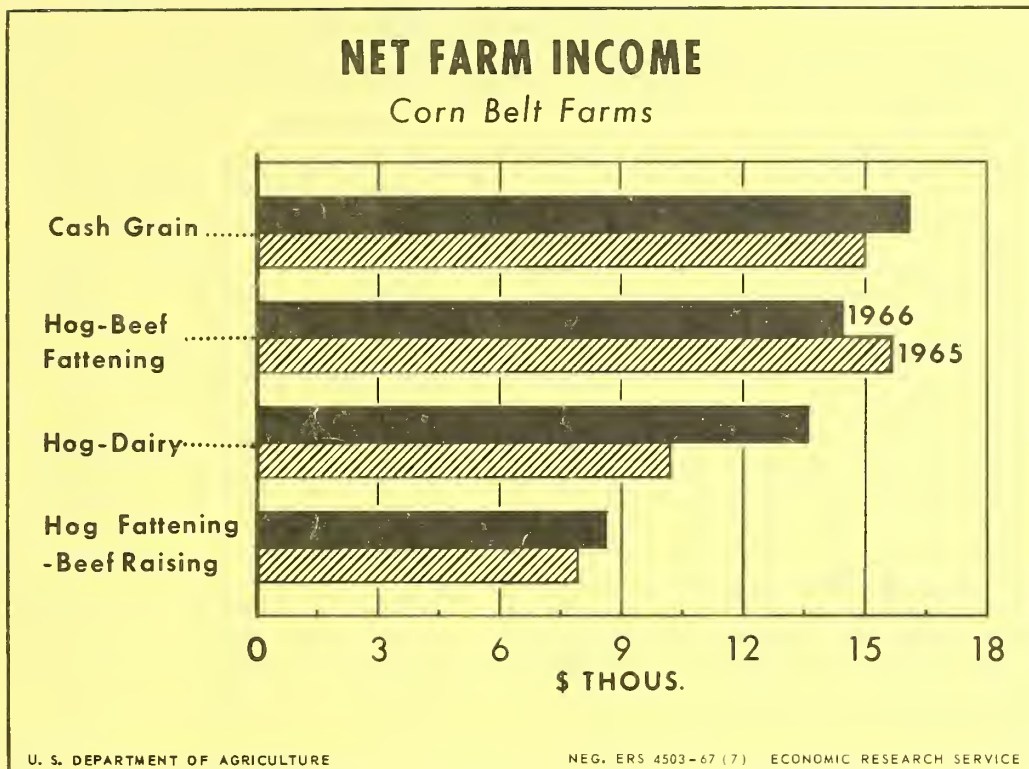


Figure 2

in 1965. Hog prices were up 10 percent, milk prices, 17 percent, and cattle prices, 22 percent. Sales of hogs and milk accounted for 82 percent of the total cash receipts in 1965 and 79 percent in 1966. Receipts from sales of crops were more than twice as large in 1966 as in 1965, reflecting larger production and increases of 11 percent in prices received for corn and soybeans.

The total value of land and other farm capital increased from \$64,870 per farm in 1960 to \$88,290 in 1966, an increase of 36 percent in 6 years. Increases in the value of machinery and livestock kept pace with the increases in acreage per farm and in land values per acre.

Hired labor is an important item of expense on these hog-dairy farms, as also are outlays for feed purchases and machinery purchases and

operation. Together, these three groups of expenses made up more than 60 percent of the total cash expenditures in 1966.

The index of production per unit of input was a little higher in 1966 than in 1965. This was a reflection mainly of the larger production of corn, hogs, and milk with relatively small increases in the quantities of labor and other operating inputs used. Production per hour of man labor rose about 5 percent from 1965 to 1966.

Hog Fattening--Beef Raising Farms

Hog fattening--beef raising farms in the southern Corn Belt had their best year of record in 1966. Their average net farm income of \$8,630 was more than double the 1957-59 average and 10 percent greater than in 1965 (table 1). Gross farm incomes on these farms were about 8

Table 1.--Organization, costs and returns, hog-dairy and hog fattening--beef raising farms, 1965 and 1966

Item	Unit	Hog-dairy		Hog fattening-- beef raising	
		1965	1966 <u>1/</u>	1965	1966 <u>1/</u>
Land in farm-----	Acre	192	196	300	306
Cropland harvested-----	do.	130	133	145	148
Crops harvested:					
Corn for grain-----	do.	55.3	57.7	61.3	60.7
Corn for silage-----	do.	6.6	6.9	---	---
Oats-----	do.	30.1	29.8	12.9	14.5
Soybeans-----	do.	4.5	5.5	33.5	35.5
Hay-----	do.	33.7	33.4	37.3	37.3
Crop yields per harvested acre:					
Corn for grain-----	Bushel	85.0	93.3	83.5	76.0
Corn for silage-----	Ton	14.5	15.1	---	---
Oats-----	Bushel	61.0	57.4	45.4	51.9
Soybeans-----	do.	27.6	26.4	28.3	27.5
Hay-----	Ton	2.4	2.9	2.3	2.3
Pigs raised-----	Number	203	219	126	138
Cows on hand, Jan. 1-----	Head	23.3	23.8	24.1	24.5
Total farm capital, Jan. 1-----	Dollar	77,880	88,290	70,410	80,610
Land and buildings-----	do.	55,300	62,130	52,500	59,060
Machinery and equipment-----	do.	8,740	9,300	7,250	8,160
Livestock-----	do.	8,500	11,030	7,200	9,590
Crops-----	do.	5,340	5,830	3,460	3,800
Total labor used-----	Hour	4,700	4,810	3,470	3,550
Hired-----	do.	1,390	1,500	550	550
Total cash receipts-----	Dollar	20,761	25,079	14,902	16,478
Crops-----	do.	731	1,757	4,842	4,842
Hogs-----	do.	9,648	10,810	5,620	7,002
Cattle-----	do.	1,828	2,292	2,898	3,186
Other livestock and livestock products-----	do.	7,424	9,130	302	348
Other, including Government payments-----	do.	1,130	1,090	1,240	1,100
Value of perquisites-----	do.	895	939	857	896
Change in inventory of crops and livestock-----	do.	156	375	546	302
Gross farm income-----	do.	21,812	26,393	16,305	17,676

Table 1.--Organization, costs and returns, hog-dairy and hog fattening--beef raising farms, 1965 and 1966--Continued

Item	Unit	Hog-dairy		Hog fattening-- beef raising	
		1965	1966 <u>1/</u>	1965	1966 <u>1/</u>
Prices received:					
Corn, per bushel-----	Dollar	1.14	1.27	1.14	1.29
Cattle, per hundredweight-----	do.	---	---	21.50	23.00
Hogs, per hundredweight-----	do.	20.60	22.70	20.70	22.60
Total cash expenditures-----	Dollar	11,978	13,143	9,125	9,726
Feed purchased-----	do.	2,106	2,483	1,238	1,414
Livestock expense-----	do.	1,128	1,232	496	577
Fertilizer and lime-----	do.	778	829	648	671
Other crop expense-----	do.	647	735	772	726
Machinery-----	do.	3,299	3,459	3,233	3,457
Farm buildings and fences-----	do.	910	935	845	875
Labor hired-----	do.	1,724	1,998	627	666
Taxes-----	do.	962	1,034	930	986
Other-----	do.	424	438	336	354
Inventory adjustment, machinery and buildings-----	do.	-382	-339	-673	-681
Total operating expenses-----	do.	11,596	12,804	8,452	9,045
Net farm income-----	do.	10,216	13,589	7,853	8,631
INDEX NUMBERS (1957-59=100):					
Gross farm income-----	---	145	175	189	205
Net farm income-----	---	142	188	198	217
Net farm production-----	---	122	131	165	161
Crop yields per acre-----	---	116	127	131	126
Production per hour of man labor-----	---	116	122	165	157
Production per unit of input-----	---	105	109	118	113
Operating expense per unit of production-----	---	121	124	112	121
Total cost per unit of production-----	---	111	113	94	104
Power and machinery (quantity)---	---	110	112	122	130
Prices received for products sold-----	---	113	129	110	123
Prices paid, including wages to hired labor-----	---	115	120	106	110

1/ Preliminary.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

percent larger than in 1965. Cash receipts from sales of farm products were up 13 percent while cash expenses were up 7 percent.

Total cash receipts in 1966 exceeded those of 1965 mainly because of greater returns from sales of hogs, soybeans, and cattle. Average receipts per farm from sales of hogs totaled \$7,000, which was 25 percent more than in 1965. Total liveweight of hogs produced per farm was greater than in any other year of record except 1964. Prices received for hogs sold averaged \$22.60 per hundred pounds, the highest since 1948. Production of soybeans was only a little larger than in 1965 because of a lower yield on only a slightly larger acreage. Soybean prices, however, were substantially higher than in 1965. Receipts from sales of cattle were up because of a larger quantity sold and a higher average price received in 1966.

Production of corn was less than in 1965 because of a slightly smaller acreage and lower yields. Yields were reduced in 1966 because of summer drought. Corn yields were 9 percent less, and soybean yields were 3 percent less than in 1965. The index of average yields of all crops was down 4 percent.

The average size of these hog fattening--beef raising farms has increased 22 percent since 1960. Total land in farms in 1966 averaged 306 acres. The total value of farm capital per farm was \$80,610 in 1966 compared with \$49,780 in 1960, an increase of 62 percent in 6 years.

Machinery purchases and operation, and feed purchases comprised the largest cash outlay, accounting for more than half of all cash expenses. Expenditures for real estate taxes, fertilizer, and hired labor were also significant.

Production per unit of input in 1966 was 113 percent of the 1957-59 average. This was 5 percent lower than in 1965, but higher than in any earlier year. The decrease from the 1965 level was mainly a reflection of the lower yields of corn and soybeans. In spite of the lower yields, production per hour of man labor was 157 percent of the 1957-59 average, reflecting increased mechanization and greater efficiency in crop and livestock production.

Hog-Beef Fattening Farms

On typical hog-beef fattening farms net farm income averaged about \$14,520 in 1966 compared with \$15,710 in 1965 (table 2). Gross farm income exceeded that of 1965 and set a new record, but cash expenses were 7 percent greater than in 1965 and more than offset the higher gross income.

Hog production was up 5 percent and prices received for hogs sold were up nearly 10 percent. Total liveweight of cattle sold was a little greater than in 1965, but prices received averaged lower. On the other hand, prices paid for feeder cattle were higher than in 1965, so the margin between buying prices and selling prices was unfavorable (fig. 3). Acreages, yields, and prices of soybeans, an important cash crop on these farms, were all higher than in 1965.

Total production of corn on these farms in 1966 averaged about 11 percent greater than in 1965. This resulted from higher yields per acre and a small increase in acreage. Oat acreage was a little less than in 1965, but the quantity produced was practically unchanged because of higher yields.

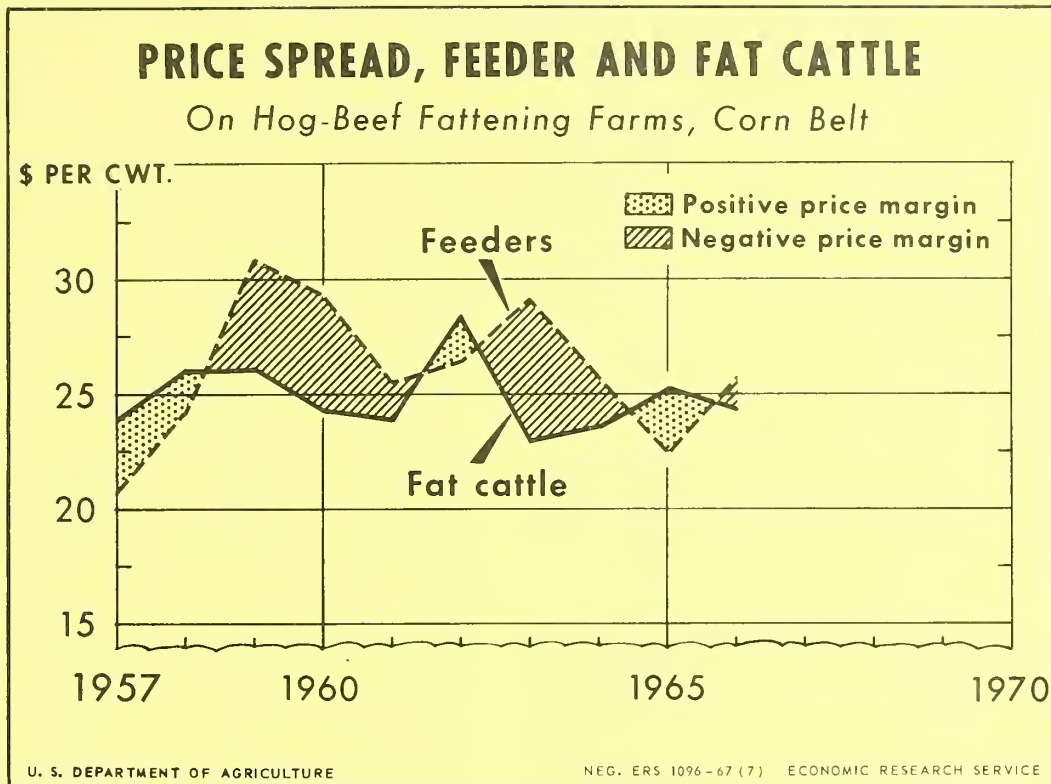


Figure 3

About 60 percent of the grain fed in 1966 went to cattle, 39 percent to hogs, and 1 percent to poultry. Operators of these farms bought about 2,000 bushels of corn in 1966. This was in addition to soybean meal and other commercial feeds bought.

From 1960 to 1966, cropland harvested on these farms increased only 3 percent, compared with an increase in all land of 9 percent. The smaller increase in cropland harvested is accounted for by the increase in acreage left idle in compliance with Government programs. The total value of land and other farm capital per farm in 1966 was \$152,980. This indicates an increase of 50 percent from the estimated total value in 1960.

The major cash expenses on these farms are for feeder cattle, feed,

machinery purchases, and machinery operation. In 1966 the cost of feeder cattle and feed totaled 61 percent of all cash farm expenses. Other important items of cash expense were fertilizer and lime, hired labor, and real estate taxes.

Production per unit of input in 1966 was 105 percent of the 1957-59 average. This increase in efficiency resulted from having a larger proportion of high return crops (more land in corn, soybeans, and alfalfa, and less in oats and clover), higher crop yields per acre and less labor per unit of output. Production per hour of man labor in 1966 was 127 percent of the 1957-59 average. The greater output per hour of labor was made possible by increased use of labor saving power and machinery, more use of purchased convenience items, and higher yields of crops.

Table 2.--Organization, costs and returns, hog-beef fattening and cash grain farms,
1965 and 1966

Item	Unit	Hog-beef fattening		Cash grain	
		1965	1966 <u>1/</u>	1965	1966 <u>1/</u>
Land in farm-----	Acre	274	279	295	308
Cropland harvested-----	do.	198	201	250	262
Crops harvested:					
Corn for grain-----	do.	98.1	102.0	107.0	120.5
Corn for silage-----	do.	11.5	11.8	---	---
Oats-----	do.	29.5	28.5	6.2	6.8
Wheat-----	do.	---	---	32.3	27.5
Soybeans-----	do.	23.9	25.2	82.0	86.3
Hay-----	do.	34.5	33.5	22.9	20.4
Crop yields per harvested acre:					
Corn for grain-----	Bushel	84.3	91.0	105.0	89.1
Corn for silage-----	Ton	14.5	15.3	---	---
Oats-----	Bushel	55.0	57.5	62.6	60.8
Wheat-----	do.	---	---	38.4	45.2
Soybeans-----	do.	27.5	30.0	32.4	30.9
Hay-----	Ton	2.5	2.8	2.7	2.5
Pigs raised-----	Number	256	276	---	---
Cattle sold-----	Cwt.	1,081	1,092	---	---
Total farm capital, Jan. 1-----	Dollar	132,840	152,980	175,460	203,180
Land and buildings-----	do.	91,790	105,740	158,710	184,180
Machinery and equipment-----	do.	11,570	12,340	16,040	18,230
Livestock-----	do.	16,360	20,800	350	400
Crops-----	do.	13,120	14,100	360	370
Total labor used-----	Hour	4,200	4,260	2,400	2,490
Hired-----	do.	1,000	1,060	340	430
Total cash receipts-----	Dollar	43,221	44,350	24,929	27,077
Crops-----	do.	1,663	2,141	22,879	25,138
Hogs-----	do.	12,220	13,796	0	0
Cattle-----	do.	27,218	26,503	0	0
Other livestock and livestock products-----	do.	100	140	190	219
Other, including Government payments-----	do.	2,020	1,770	1,860	1,720
Value of perquisites-----	do.	990	1,016	1,390	1,583
Change in inventory of crops and livestock-----	do.	325	-25	18	32
Gross farm income-----	do.	44,536	45,341	26,337	28,692

Table 2.--Organization, costs and returns, hog-beef fattening and cash grain farms,
1965 and 1966--Continued

Item	Unit	Hog-beef fattening		Cash grain	
		1965	1966 <u>1/</u>	1965	1966 <u>1/</u>
Prices received:					
Corn, per bushel-----	Dollar	1.14	1.26	1.16	1.32
Wheat, per bushel-----	do.	---	---	1.35	1.74
Cattle, per hundredweight-----	do.	25.18	24.26	---	---
Hogs, per hundredweight-----	do.	20.60	22.60	---	---
Total cash expenditures-----	Dollar	29,125	31,111	12,518	13,438
Feed purchased-----	do.	7,555	6,878	146	161
Livestock expense-----	do.	<u>2/11,323</u>	<u>2/13,036</u>	42	43
Fertilizer and lime-----	do.	1,291	1,471	1,325	1,502
Other crop expense-----	do.	1,022	1,160	1,348	1,422
Machinery-----	do.	4,124	4,406	6,089	6,342
Farm buildings and fences-----	do.	680	695	770	800
Labor hired-----	do.	1,257	1,420	400	516
Taxes-----	do.	1,323	1,467	1,808	2,022
Other-----	do.	550	578	590	630
Inventory adjustment, machinery and buildings-----	do.	-297	-292	-1,145	-856
Total operating expenses-----	do.	28,828	30,819	11,373	12,582
Net farm income-----	do.	15,708	14,522	14,964	16,110
INDEX NUMBERS (1957-59=100):					
Gross farm income-----	---	176	179	184	200
Net farm income-----	---	167	154	207	223
Net farm production-----	---	133	144	158	151
Crop yields per acre-----	---	120	129	132	119
Production per hour of man labor-----	---	119	127	169	155
Production per unit of input-----	---	102	105	123	111
Operating expense per unit of production-----	---	113	120	102	117
Total cost per unit of production-----	---	104	111	100	116
Power and machinery (quantity)---	---	120	122	200	215
Prices received for products sold-----	---	106	107	109	125
Prices paid, including wages to hired labor-----	---	103	113	116	120

1/ Preliminary.

2/ Includes purchased feeder cattle.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

OFFICIAL BUSINESS

Cash Grain Farms

Net farm incomes in 1966 on cash grain farms in the central Corn Belt were the highest on record, averaging \$16,110 per farm (table 2). This was 8 percent more than in 1965. Total cash receipts were up 9 percent, primarily because of increased sales of corn, soybeans and wheat. Practically all of the cash income on these farms is from the sale of crops and from Government farm program payments. Livestock production is negligible. In 1966, sales of corn accounted for 52 percent of the total cash receipts, soybeans for 28 percent, wheat for 8 percent, and Government payments for 6 percent.

Acreages of corn and soybeans on these farms were larger than in 1965, but yields were lower leaving grain production slightly lower on balance. Higher yields of wheat off-

set a reduction in acreage. However, prices received for these crops were higher in 1966, and as a result the value of sales of these crops in 1966 exceeded the value in 1965 by nearly \$2,500 per farm.

Total cash expenses on these farms averaged 7 percent higher than in 1965. The major items were machinery purchases, machinery operation, real estate taxes, and fertilizer, with significant sums going for seed, farm building repairs, contract work, and hired labor.

The indexes of net farm production and production per unit of input in 1966 were well above their 1957-59 averages, but were lower than in 1965. The favorable comparison with 1957-59 reflects increased mechanization and improved practices in crop production. The unfavorable comparison with 1965 is due almost entirely to drought and lower yields of corn and soybeans in 1966.